

AMENDMENTS TO ABSTRACT

Please delete the original abstract and substitute therefor the following new abstract:

A speech recognition system that is insensitive to external noise and applicable to actual life includes an A/D converter that converts analog voice signals to digital signals. An FIR filtering section employs powers-of-two conversion to filter the digital signals converted at the A/D converter into numbers of channels. A characteristic extraction section immediately extracts speech characteristics having strong noise-resistance from the output signals of the FIR filtering section without using additional memories. A word boundary detection section discriminates the information of the start-point and the end-point of a voice signal on the basis of the characteristics extracted by the characteristic extraction section. Finally, a normalization/recognition section codes and outputs the final result by carrying out a timing normalization and a classifying process using a radial basis function (RBF) neural network on the basis of the voice characteristics provided by the characteristic extraction section and the information for the start-point and the end-point of the voice signal from the word boundary detection section.